

Date: Thu, 29 Sep 94 04:30:11 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #324
To: Ham-Ant

Ham-Ant Digest Thu, 29 Sep 94 Volume 94 : Issue 324

Today's Topics:

Antennas are prohibited ...!!!!!!!
Can Tower be used as antenna?
CHANGE E-MAIL ADDRESS
Experience with Sommer-Antennas products?
Grounding and Lightning Protection
Phased Triangle Array 80M?
SHF omni-directional antennae

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>

Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 27 Sep 1994 22:42:22 GMT
From: gatech!gt-news!temporalis@uunet.uu.net
Subject: Antennas are prohibited ...!!!!!!!
To: ham-ant@ucsd.edu

Roderick Padilla (cismrp@gsusgi2.gsu.edu) wrote:

: I live in a subdivision that WILL not accept any kind of outdoors antennas. I
: need to know the best solution to install 2M antenna without going "ilegal".

: /Roderick Padilla
: wp4-boc

If you have an attic, you could put an antenna there. Or else you may try to
see if the 'Ventenna' system if you have roof vents.
Or you may try to come up your version of the famous 'Bed Sheet' antenna.

One way or the other, I hope to hear you on the air soon!

73 de K04IW

Ben Nabors
temporalis@photobooks.gatech.edu

Date: 28 Sep 94 12:38:57 CDT
From: equalizer!timbuk.cray.com!ned.cray.com!labman!demers@network.ucsd.edu
Subject: Can Tower be used as antenna?
To: ham-ant@ucsd.edu

Ok guys, I've got one for you. I'm slowly relearning the code, working to get reticketed after 20 years away from the hobby. I'm planning on being mostly maritime mobile, on a sailboat. Historically, an insulated backstay is used along with an antenna tuner, but I have seen articles saying that I could actually use an uninsulated backstay, or ANY part of the standing rigging (the stainless steel wire portion of the rigging holding the mast up) regardless of the fact that the rigging is grounded to the hull and therefore the ground. The trick is to separate the center conductor and shield of the feed wire by a specific distance, probably 1/4 wavelength. Questions: Is this possible, or worth trying? Is the 1/4 wavelength figure correct? Is there any danger of RF burns to someone touching the rigging while transmitting?

The ARRL antenna book mentions using an antenna tower for this purpose. How effective is this method?

Thanks for the advice.

Larry DeMers
demers@els.cray.com

Date: 29 Sep 94 00:45:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: CHANGE E-MAIL ADDRESS
To: ham-ant@ucsd.edu

PLEASE CHANGE MY E-MAIL ADDRESS FROM LEROYDL@.AOL

TO W4VIWBBS@.AOL

THANKS.

Date: Tue, 27 Sep 1994 14:02:15 +0000
From: ihnp4.ucsd.edu!pacbell.com!sgiblab!spool.mu.edu!howland.reston.ans.net!
news.sprintlink.net!demon!microvst.demon.co.uk!tgold@network.ucsd.edu
Subject: Experience with Sommer-Antennas products?
To: ham-ant@ucsd.edu

I plan to use a beam from Sommer-Antennas of Geneve, Florida, and ask whether anyone has advice or experience in installing, adjusting or using one of their beams. It is the XP-807, the long boom version with the low band additions, that I have my plans for.

--
Tony G3SKR & AA2PM
tgold@microvst.demon.co.uk

Date: Tue, 27 Sep 1994 15:35:39 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!
howland.reston.ans.net!gatech!wa4mei!ke4zv!gary@network.ucsd.edu
Subject: Grounding and Lightning Protection
To: ham-ant@ucsd.edu

In article <Cwr5EB.1JD@icon.rose.hp.com> greg@core.rose.hp.com (Greg Dolkas) writes:

>Gary Coffman (gary@ke4zv.atl.ga.us) wrote:

>: Use that metal panel in your window as your station single point
>: ground. Tie your power third wire to the panel too, and use a
>: power line suppressor at the panel if you can afford it. (I strongly
>: recomend this.)

>

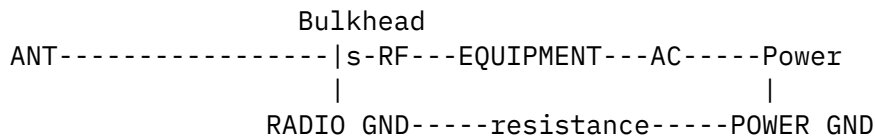
>Won't you have problems with ground loops when you hook the house 3rd wire to
>a second ground? It's already grounded once at the service entrance, which in
>my case is clear on the other side of the house.

You'll have trouble with ground loops if you *don't* tie the power ground lead to your single point ground connection. Besides the NEC *requires* you to tie the service ground to the antenna ground. What you are trying to achieve is equal potential on all the "ground" cables entering your equipment. What you *can't* permit is to have your equipment be part of the path to ground for lightning energy.

>Also, by "power line suppressor at the panel" do you mean the service panel,
>or your tin box in the window. If it's the tin box, how do you hook it up?

Surface mount the power line suppressor on the bulkhead panel. Let's try some ASCII art.

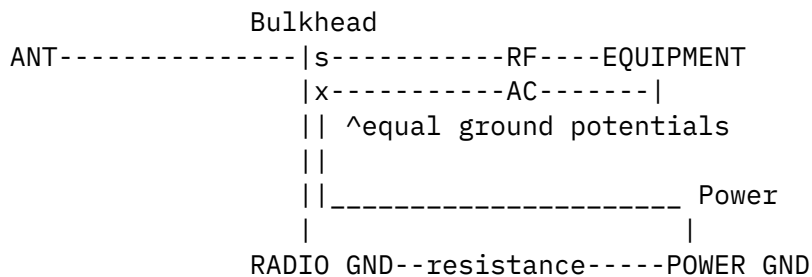
-----BAD DO NOT USE-----



's' is antenna suppressor mounted through bulkhead

This is **bad**. Lightning energy now has two paths to ground. One via the radio ground, and the other through the **equipment** to the power wiring and power ground. This is guaranteed to fry your equipment in a strike. The resistance of the Earth between RADIO GND and POWER GND will also allow induced noise pickup (hum) in the equipment. This is a classic ground loop.

-----GOOD DO THIS-----



's' is antenna suppressor, 'x' is power suppressor, both mounted to bulkhead

Now there are still two paths to ground for a lightning surge, but **neither** is through the equipment. The resistance between RADIO GND and POWER GND is also effectively shorted out at the bulkhead, so the ground loop is **shorted** as far as the equipment is concerned, and no noise and hum is transferred to the equipment.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		emory!kd4nc!ke4zv!gary
534 Shannon Way		Guaranteed!		gary@ke4zv.atl.ga.us
Lawrenceville, GA 30244				

Date: 27 Sep 1994 10:45:14 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!swiss.ans.net!
malgudi.oar.net!infinet!wvanho@network.ucsd.edu
Subject: Phased Triangle Array 80M?
To: ham-ant@ucsd.edu

Gary T. Schwartz (garyk9gs@solaria.mil.wi.us) wrote:

: I got to thinking, and not having a tower that high (!), what if the
: elements were made instead from top-loaded "T" antennas, still using one
: or possible 2 elevated radials?? I think an 80M top-loaded element could
: be made about 40' high, instead of 66' high.
: I next looked at using 3 elements in a triangle array, instead of 4.

: I could not find any way to switch the array direction....anyone have any
: ideas?? Also, has anyone modeled or constructed 1/4 wave monopoles with
: elevated radial systems??

Gary,

I think you can make this scheme work by switching so that two of the
three are in phase and the 3d at 90-degree lead or lag. This will give
you a choice of 6 directions at 60-degree spacing. You could probably
get six more directions by using only two of the three with 90-degree
shift, with the 3d unused. It would require that the 3d be detuned, I
suspect, otherwise it would act as a parasitic radiator and mess up the
pattern.

Good luck, and 73,
Van - W8UOF

* * * * *
* It ain't wot ya don't know 't gets ya into trouble. *
* It's wot ya know 't ain't true. - "Mr. Dooley" *
* * * * *

wvanho@infinet.com

Date: 28 Sep 1994 18:04:32 GMT
From: noc.near.net!bigboote.WPI.EDU!kedz@uunet.uu.net
Subject: SHF omni-directional antennae
To: ham-ant@ucsd.edu

Yep,

An alfred slot, is an omnidirectional horizontally polarized antenna that can realize around 6dBi (not positive about this gain figure...) They are used quite often for microwave beacons.

Alternatively, a discone antenna is a vertically polarized very wide bandwidth antenna, that is easy to build and very rugged. At over 1 GHz its pretty small too. Not much gain though.

BTW you can use a 1/4 vertical at any frequency (where dimentions are not ridiculously small. disadvantage is 0dBd gain

For a repeater it sounds as though you need (or would like) some gain and vertical polarization. I believe there are a number of commercially available (stateside) microwave repeater antennas. (try Microwave Journal for advertisements)

hope this is some help.

John Wu3c

End of Ham-Ant Digest V94 #324
